

## CERTIFICATE OF ANALYSIS

PRODUCT NAME: CITRIC ACID ANHYDROUS 30-100 TC-221 MESH

DATE:AUG.25,2019

THIS IS TO CERTIFY THAT THE ANALYSIS RESULT OF THE GOODS IS AS FOLLOWS:

| ITEM  | TC-221                              | TC-222                              | TC-223                              | TC-224                           | RESULT               |  |  |  |
|---|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|----------------------|--|--|--|
| CHARACTERISTICS                             | COLORLESS OR WHITE CRYSTAL          |                                     |                                     |                                  |                      |  |  |  |
| IDENTIFICATION                              | PASS THE TEST                       |                                     |                                     |                                  |                      |  |  |  |
| LIGHT<br>TRANSMITTANCE                      | /                                   | /                                   | /                                   | /                                | ≥98%                 |  |  |  |
| CLARITY&COLOUR<br>OF SOLUTION               | PASS TEST                           | /                                   | PASS TEST                           | /                                | PASS TEST            |  |  |  |
| ASSAY                                       | 99.5-100.5%                         | ≥99.50%                             | 99.5-100.5%                         | 99.5-100.5%                      | 99.89%               |  |  |  |
| WATER                                       | ≤1.0%                               | ≤0.5%                               | ≤0.1%                               | ≤1.0%                            | 0.09%                |  |  |  |
| SULPHATED ASH                               | ≤0.1%                               | ≪0.05%                              | ≤0.1%                               | ≤0.1%                            | ≪0.05%               |  |  |  |
| SULPHATE                                    | ≤150ppm                             | /                                   | ≤150ppm                             | PASS TEST                        | ≪30ppm               |  |  |  |
| OXALATE                                     | ≤360ppm                             | ≤100ppm                             | ≤360ppm                             | ≤360ppm                          | ≤20ppm               |  |  |  |
| CALCIUM                                     | /                                   | /                                   | /                                   | /                                | ≤20ppm               |  |  |  |
| HEAVY METALS                                | ≤10ppm                              | ≤5ppm                               | ≤10ppm                              | ≤10ppm                           | ≤1ppm                |  |  |  |
| IRON  | /                                   | /                                   | /                                   | 1                                | ≤1ppm                |  |  |  |
| CHLORIDE                                    | /                                   | /                                   | /                                   | /                                | ≤5ppm                |  |  |  |
| READILY<br>CARBURETED<br>SUBSTANCES         | NOT<br>EXCEEDING<br>THE<br>STANDARD | NOT<br>EXCEEDING<br>THE<br>STANDARD | NOT<br>EXCEEDING<br>THE<br>STANDARD | NOT<br>EXCEEDING<br>THE STANDARD | K≤1.0                |  |  |  |
| BACTERIAL<br>ENDOTOXINS                     | ≤0.5IU/mg                           | /                                   | PASS TEST                           | /                                | ≤0.5IU/mg            |  |  |  |
| ALUMINIUM                                   | ≤0.2ppm                             | /                                   | ≤0.2ppm                             | /                                | ≤0.2ppm              |  |  |  |
| ARSENIC                                     | /                                   | ≤1ppm                               | /                                   | ≤4ppm                            | ≤1ppm                |  |  |  |
| MERCURY                                     | /                                   | ≤1ppm                               | /                                   | /                                | ≤0.1ppm              |  |  |  |
| LEAD  | /                                   | ≤1ppm                               | /                                   | /                                | ≤0.5ppm              |  |  |  |
| TRIDODECYLAMINE                             | /                                   | /                                   | /                                   | /                                | ≤0.1ppm              |  |  |  |
| POLYCYCLIC<br>AROMATIC<br>HYDROCARBONS(PAH) | 1                                   | /                                   | 1                                   | ≤0.05<br>(260-350nm)             | ≤0.05<br>(260-350nm) |  |  |  |
| ISOCITRIC ACID                              | /                                   | /                                   | /                                   | PASS TEST                        | PASS TEST            |  |  |  |

## 更 山東天成化工有限公司 Shandong Tiancheng Chemical Co., Ltd.

|                               |  |                 |      |                        | FILTRATION TIME |
|-------------------------------|--|-----------------|------|------------------------|-----------------|
| WATER INSOLUBLE<br>SUBSTANCES |  |                 |      |                        | NOT TMORE THAN  |
|                               |  |                 |      |                        | 1MIN;FILTER     |
|                               |  |                 |      |                        | MEMBRANCE       |
|                               |  |                 |      |                        | DOESN'T         |
|                               |  |                 |      |                        | BASCIALLY       |
|                               |  |                 |      |                        | CHANGE          |
|                               |  |                 |      |                        | COLOR VISUAL    |
|                               |  |                 |      |                        | MOTTLED         |
|                               |  | NOHENG CHI      | EDT. |                        | PARTICLES       |
|                               |  | LY ARTI         |      |                        | NOT MORE THAN 3 |
| Analyst:Zeng Yan              |  | ● 质量检验<br>● ★ C |      | Auditor:Zhang Yinguang |                 |
|                               |  |                 |      |                        |                 |